



UNITED STATES PATENT AND TRADEMARK OFFICE

ap

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/664,942	09/19/2000	Christine A. Smith	IL-10623	5232

7590 02/24/2004

Christopher J Horgan
Assistant Laboratory Counsel
Lawrence Livermore National Laboratory
P O Box 808 L 703
Livermore, CA 94551

EXAMINER

ZIMMERMAN, GLENN

ART UNIT PAPER NUMBER

2879

DATE MAILED: 02/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/664,942	SMITH ET AL.	
	Examiner	Art Unit	
	Glenn Zimmerman	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-28 and 45-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-28 and 45-53 is/are allowed.
- 6) ☒ Claim(s) 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Amendment, filed on November 20, 2003, has been entered and acknowledged by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 14 is rejected under 35 U.S.C. 102(b) as being anticipated by Smith et al. 98/XThE10.

Regarding claim 14, Smith et al. disclose a material system, comprising an energy beam, a pre-processed composite material (**samples Z1, Z2 or Z3; page 2 line 2**) having a matrix (**page 1 line 6**) containing a plurality of nanocrystals (**page 2 line 18**) and a plurality of traps (**page 2 line 18**) arranged to received the energy beam (**page 3 line 3 laser annealing**); and wherein the received energy beam reduces the size of the plurality of nanocrystals and the number of the plurality of traps (**page 3 line 2 and line 4**) to produce a post-processed material. . The examiner notes on pages 9 and 10 of the instant specification that a laser or also an argon ion laser is a suitable source of irradiation to reduce the size of the plurality of nanocrystals. The examiner notes that the laser annealing in the reference can be anywhere from 0.14W to 6.5W over 10

Art Unit: 2879

minutes. The examiner notes that this range of values is within that given in the instant application on page 10 of the specification where the ranges are 10 mW to 10 Watts for 1 to 30 minutes for reducing the size of nanocrystals. The examiner still clearly feels that this is a product-by-process claim and that the process should not be given any patentable weight.

As to limitation arranged to receive the energy beam wherein the received energy beam reduces the size of the plurality of nanocrystals and the number of the plurality of traps in claim 14, it is the process step incorporated into which renders the claim as a product-by-process.

The courts have been holding that: “- In spite of the fact that a product-by-process claim may recite only process limitation, it is the product which is covered by the claim and not the recited process steps- - . (In re Hughes, 182 USPQ 106) - -”. Also - - Patentability of a claim to a product does not rest merely on a difference in the method by which that product is made. Rather, it is the product itself which must be new and unobvious. (In re Pilkington, 162 USPQ 147) - -.” Accordingly, “- - a rejection based on 35 U.S. C. section 102 or alternatively on 35 U.S. C. section 103 of the statute is eminently fair and acceptable.” (In re Brown and Saffer, 173 USPQ 685 and 688). - - The determination of the patentability of product-by-process claim is based on the product itself rather than on the process by which the product is made- -. In re Thrope, 777 F. 2d 695, 227 USPQ 964 (Fed. Cir. 1985).

As such, no patentable weight is given to process steps recited in claim 14.

Allowable Subject Matter

Claims 15-28 and 45-53 are allowed.

Response to Arguments

Applicant's arguments filed on November 20, 2003 have been fully considered but they are not persuasive. The applicants assert that "to reduce the size of the plurality of nanocrystals" is not disclosed in Smith et al. The examiner notes that the particular claim of interest claim 14 is not a method of manufacturing claim but a product claim. Processes are not given patentable weight in product claims, and the particular limitation of concern communicated above is a process MPEP 2113.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 2879

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

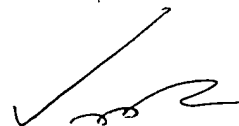
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenn Zimmerman whose telephone number is (571) 272-2466. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Glenn Zimmerman



Vip Patel
Primary Examiner
Art Unit 2879